

Claims

- [c1] 1. A fastener, comprising:
a shank covered with a spiral set of teeth; and
a flexible core material running internally to said shank and along the length of said shank; and
coupling means for connecting said flexible core material to said shank at both distal ends of said shank so that said fastener is laterally flexible along its length.
- [c2] 2. The fastener of Claim 1, wherein said coupling means is welding.
- [c3] 3. The fastener of Claim 1, wherein said coupling means is pinching.
- [c4] 4. The fastener of Claim 1, wherein said flexible core material comprises innermost wires grouped and bound with wires spirally wound in opposing directions.
- [c5] 5. The fastener of Claim 1, wherein said spiral set of teeth have a convex portion and a concave portion, wherein the convex portion is smaller than said concave portion.
- [c6] 6. The spiral set of teeth of Claim 5, wherein said convex portion of a lower layer of spiral teeth fits into said concave portion of an upper layer of spiral teeth.
- [c7] 7. The fastener of Claim 1, wherein said spiral set of teeth interlock one into another.
- [c8] 8. A fastener, comprising:
a shank covered with a spiral set of teeth; and
a flexible core material running internally to said shank and along the length of said shank; and
coupling means for connecting said flexible core material to said shank at both distal ends of said shank so that said fastener is laterally flexible along its length; and
means at a distal end of said shank for imparting rotational movement thereto.

- [c9] 9. The fastener of Claim 8, wherein said coupling means is welding.
- [c10] 10. The fastener of Claim 8, wherein said coupling means is pinching.
- [c11] 11. The fastener of Claim 8, wherein said means for imparting rotational movement is a bolt head.
- [c12] 12. The fastener of Claim 8, wherein said means for imparting rotational movement is a screw head.
- [c13] 13. The fastener of Claim 8, wherein said flexible core material comprises innermost wires grouped and bound with wires spirally wound in opposing directions.
- [c14] 14. The fastener of Claim 8, wherein said spiral set of teeth have a convex portion and a concave portion, wherein the convex portion is smaller than said concave portion.
- [c15] 15. The fastener of Claim 14, wherein said convex portion of a lower layer of spiral teeth fits into said concave portion of an upper layer of spiral teeth.
- [c16] 16. The fastener of Claim 8, wherein said spiral set of teeth interlock one into another.
- [c17] 17. A method of coupling two members, comprising:
bringing said members adjacent one to the other; and
applying a laterally flexible coupling device to said members; and
imparting rotational force to a distal end of said laterally flexible coupling device, wherein said laterally flexible coupling device is comprised of a shank covered with a spiral set of teeth, said shank further comprising an internal flexible core material which is coupled to said shank at both distal ends of said shank.
- [c18] 18. The method of Claim 17, wherein said members are not co-parallel.
- [c19] 19. The method of Claim 17, wherein said members are not co-linear.
- [c20] 20. The method of Claim 17, wherein said members are used in robotics.

- [c30] 30. The method of Claim 29, wherein said means for imparting rotational movement is a bolt head.
- [c31] 31. The method of Claim 29, wherein said means for imparting rotational movement is a screw head.
- [c32] 32. The method of Claim 29, wherein said flexible inner core material is coupled to said shank via welding.
- [c33] 33. The method of Claim 29, wherein said flexible inner core material is coupled to said shank via pinching.
- [c34] 34. The method of Claim 29, wherein said flexible core material comprises innermost wires grouped and bound with wires spirally wound in opposing directions.
- [c35] 35. A method of making a fastener, comprising:
surrounding flexible inner core material with a shank comprising a spiral set of teeth; and
coupling flexible inner core material with said shank at either distal end of said shank so that said fastener is flexible along its length.
- [c36] 36. The method of Claim 35, wherein said flexible inner core material is coupled to said shank via welding.
- [c37] 37. The method of Claim 35, wherein said flexible inner core material is coupled to said shank via pinching.
- [c38] 38. The method of Claim 35, wherein said flexible core material comprises innermost wires grouped and bound with wires spirally wound in opposing directions.